AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

What is claimed is:

1. (CURRENTLY AMENDED) An isolated or purified polynucleotide~~, characterized in that it comprises~~ comprising:

   a) a nucleotide sequence with at least 60%, ~~preferably~~ at least 80% ~~and more preferably,~~ or at least 95% identity with SEQ ID NO:1 (DG747) or SEQ ID NO: 2 (DG772)[[.]];

   b) a nucleotide sequence with at least 10 consecutive nucleotides identical to SEQ ID NO: 1 or SEQ ID NO: 2; or

   c) a nucleotide sequence that hybridizes under highly stringent conditions with a polynucleotide according to a) or b).

2. (CANCELED)

3. (CANCELED)

4. (CURRENTLY AMENDED) An isolated or purified polypeptide~~, characterized in that it is coded for by a polynucleotides according to any one of claims 1 to 3.~~ comprising a polypeptide encoded by a polynucleotide as claimed in claim 1.

5. (CURRENTLY AMENDED) An isolated or purified polypeptide~~, characterized in that it has~~ comprising:

   a) a peptide sequence with at least 60%, ~~preferably~~ at least 80% ~~and more preferably,~~ or at least 95% homology with SEQ ID NO: 3 (DG747) or SEQ ID NO: 4 (DG 772)[[.]];

b) a peptide sequence with at least 5 consecutive amino acids identical to SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, or SEQ ID NO: 8; or

c) a peptide sequence with at least 40%, at least 60%, at least 80%, or at least 95% identity with SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 10, or SEQ ID NO: 12.

6. (CANCELED)

7. (CANCELED)

8. (CURRENTLY AMENDED) A recombinant or chimeric recombinant polypeptide, ~~characterized in that it comprises~~ comprising at least one polypeptide ~~according to any one of claims 4 to 7.~~ as claimed in claim 4.

9. (CURRENTLY AMENDED) An isolated or purified antigen~~, characterized in that it consists in~~ comprising:

a) a polynucleotide ~~according to any one of claims 1 to 3,~~ as claimed in claim 1;

b) ~~or~~ an isolated or purified polypeptide ~~according to any one of claims 4 to 8.~~ encoded by a polynucleotide as claimed in claim 1;

c) an isolated or purified polypeptide comprising:

i) a peptide sequence with at least 60%, at least 80%, or at least 95% homology with SEQ ID NO: 3 (DG747) or SEQ ID NO: 4 (DG 772);

ii) a peptide sequence with at least 5 consecutive amino acids identical to SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, or SEQ ID NO: 8; or

iii) a peptide sequence with at least 40%, at least 60%, at least 80%, or at least 95% identity with SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 8, SEQ ID NO: 10, or SEQ ID NO: 12; or

d) a recombinant or chimeric recombinant polypeptide comprising at least one polypeptide according to b) or c).

10. (CURRENTLY AMENDED) An antigenic conjugate ~~constituted by polynucleotides according to any one of claims 1 to 3, and/or polypeptides according to any one of claims 4 to 8;~~ comprising at least one isolated or purified antigen as claimed in claim 9 and a support on which said ~~polynucleotides/polypeptides are~~ antigen is adsorbed.

11. (CURRENTLY AMENDED) A conjugate according to claim 10, ~~characterized in that~~ wherein the support is ~~constituted by~~ microspheres, microparticles of latex beads, polyphosphoglycan microparticles (PGLA), or polystyrene microparticles.

12. (CURRENTLY AMENDED) A process ~~Use of a conjugate according to claim 10 or 11,~~ for immunizing individuals who are infected or susceptible of being infected with malaria comprising administering to the individuals a conjugate as claimed in claim 10.

13. (CURRENTLY AMENDED) A product comprising a monoclonal ~~Monoclonal~~ or a polyclonal ~~antibodies~~ antibody specifically recognizing

a) at least one ~~of the polynucleotides, polypeptides and/or conjugates defined in claims 1 to 11.~~ isolated or purified antigen as claimed in claim 9;

b) an antigenic conjugate comprising at least one isolated or purified antigen as claimed in claim 9 and a support on which said antigen is adsorbed; or

c) a combination of the at least one antigen and the antigenic conjugate.

14. (CURRENTLY AMENDED) A product comprising an antibody as claimed in ~~Antibodies according to~~ claim 13, ~~characterized in that they are~~ wherein said antibody is humanized.

15. (CURRENTLY AMENDED) A ~~cloning or expression~~ vector comprising a polynucleotide ~~sequence according to any one of claims 1 to 3.~~ as claimed in claim 1 incorporated into a cloning or expression vector.

16. (CURRENTLY AMENDED) A vector ~~according to~~ as claimed in claim 15, ~~in which~~ wherein said polynucleotide ~~sequence~~ is incorporated into a site that is not essential to replication of said vector.

17. (CURRENTLY AMENDED) A vector ~~according to claim 15 or 16, characterized in that~~ as claimed in claim 15, wherein said vector is ~~selected from the group formed by~~ a plasmid[[s]], cosmid~~s, and~~, or phage[[s]].

18. (CURRENTLY AMENDED) A host cell comprising a vector ~~according to any one of claims 15 to 18.~~ as claimed in claim 15.

19. (CURRENTLY AMENDED) A recombinant *E. coli* cell, wherein said cell is a cell ~~selected from cells~~ deposited at the ~~CNCM on 23rd May 2001 with accession numbers~~ Collection Nationale de Culture de Microorganisms, Paris, France (CNCM) under Accession No. I-2671 ~~and~~ or I-2672.

20. (CURRENTLY AMENDED) An immunogenic composition comprising

- at least one ~~of the following elements: polynucleotides according to any one of claims 1 to 3, polypeptides according to any one of claims 4 to 8, conjugates according to claim 10 or 11~~ isolated or purified antigen as claimed in claim 9 or an antigenic conjugate comprising at least one isolated or purified antigen as claimed in claim 9 and a support on which said antigen is adsorbed; and
- a pharmaceutically acceptable vehicle.

21. (CURRENTLY AMENDED) An immunogenic composition according to claim 20, ~~characterized in that it~~ further ~~contains~~ comprising ~~at least one compound selected from the group formed by~~ alum, QS21, montanide, $SBAS_2$ adjuvant, ~~or~~ and incomplete Freund's adjuvant.

22. (CURRENTLY AMENDED) An immunogenic composition ~~according to~~ as claimed in claim 20 ~~or 21, characterized in that the polypeptide molecule is adsorbed onto~~, wherein the support is a microparticle[[s]].

23. (CURRENTLY AMENDED) An immunogenic composition ~~according to any one of claims 20 to 22, in which~~ as claimed in claim 20, wherein said ~~polynucleotide molecule~~ antigen is in the form of DNA.

24. (CURRENTLY AMENDED) An immunogenic composition ~~according to any one of clams 20 to 23, characterized in that it~~ as claimed in claim 20, wherein said immunogenic composition further comprises ~~at least one epitope selected from the group formed by: the proteins~~ a peptide molecule, wherein the peptide

molecule is CS, MSP-1, MSP-3, LSA-1, TRAP, STARP, SALSA, SALSA 1, SALSA II, or ~~and~~ LSA-3.

25. (CURRENTLY AMENDED) An immunogenic composition ~~according to any one of claims 20 to 24, characterized in that it~~ as claimed in claim 20, wherein said immunogenic composition can produce a cell response; a ~~and/or~~ humoral response, or a cell response and a humoral response *in vivo*, ~~and/or~~ *in vitro*, or *in vivo* and *in vitro*.

26. (CURRENTLY AMENDED) An immunogenic composition ~~according to any one of claims 20 to 25, characterized in that it can allow~~ as claimed in claim 20, wherein said immunogenic composition allows the production of γ-interferon by leukocytes from subjects immunized with irradiated sporozoites.

27. (CURRENTLY AMENDED) An immunogenic composition ~~according to any one of claims 20 to 26, characterized in that it can produce~~ as claimed in claim 20, wherein said immunogenic composition produces a humoral IgG response.

28. (CURRENTLY AMENDED) An immunogenic composition according to claim 27, ~~characterized in that it can produce a humoral~~ wherein said response is a type IgG1, a type IgG2, a type IgG3, ~~and/or~~, or a type IgG4 humoral response, or any combination thereof.

29. (CURRENTLY AMENDED) An immunogenic composition ~~according to any one of claims 20 to 28, characterized in that it~~ as claimed in claim 20, wherein said immunogenic composition is capable of inducing, *in vivo* and *in vitro*, protection by a challenge infection with *Plasmodium falciparum*.

30. (CURRENTLY AMENDED) An anti-malaria vaccine comprising:

- at least one ~~of the following elements: polynucleotides according to any one of claims 1 to 3, polypeptides according to any one of claims 4 to 8, conjugates according to claim 10 or 11~~ isolated or purified antigen as claimed in claim 9 or an antigenic conjugate comprising at least one isolated or purified antigen as claimed in claim 9 and a support on which said antigen is adsorbed; and
- a pharmaceutically acceptable vehicle.

31. (CURRENTLY AMENDED) A vaccine according to claim 30, ~~characterized in that it~~ wherein said vaccine further comprises ~~at least one epitope selected from the group formed by: the proteins~~ a peptide molecule, wherein the peptide molecule is CS, MSP-1, MSP-3, LSA-1, TRAP, STARP, SALSA, SALSA 1, SALSA II, or ~~and~~ LSA-3.

32. (CURRENTLY AMENDED) A pharmaceutical composition comprising, ~~as the~~ an active substance[[,]] and a pharmaceutically acceptable vehicle, wherein the active substance is ~~one or more polyclonal or monoclonal antibodies~~ at least one monoclonal or polyclonal antibody according to claim 13, and wherein the antibody is optionally humanized. ~~or 14, in association with a pharmaceutically acceptable vehicle.~~

33. (CURRENTLY AMENDED) A pharmaceutical composition according to claim 32, ~~characterized in that it further contains at least one compound selected from the group formed by~~ further comprising alum, QS21, montanide, $SBAS_2$ adjuvant, or ~~and~~ incomplete Freund's adjuvant.

34. (CURRENTLY AMENDED) A method of treating malaria comprising administering a product to a human, wherein the product comprises ~~Use of at least one of the following elements~~:

a) at least one ~~polynucleotides according to any one of claims 1 to 3, polypeptides according to any one of claims 4 to 8, conjugates according to claim 10 or 11;~~ isolated or purified antigen as claimed in claim 9;

b) an antigenic conjugate comprising at least one isolated or purified antigen as claimed in claim 9 and a support on which said antigen is adsorbed; or

e) a monoclonal or polyclonal antibody specifically recognizing the at least one antigen or the antigenic conjugate, wherein the antibody is optionally humanized. ~~antibodies according to claim 13 or 14; for the production of a drug intended for the treatment of malaria.~~

35. (CURRENTLY AMENDED) An *in vitro* ~~malaria diagnostic method~~ process of detecting malaria in an individual susceptible of being infected with *Plasmodium falciparum*, ~~comprising the following steps~~ wherein the process comprises:

a) bringing a biological ~~tissue and/or fluid~~ sample removed from an individual who is susceptible of being infected with *Plasmodium falciparum* ~~under conditions allowing an immunological reaction~~ into contact with an antibody according to claim 13 ~~or 14~~ under conditions allowing ~~to allow~~ the formation of an immune complex[[es]] between said antibody and an antigen that may be present in said sample, wherein said sample is a fluid, tissue, or fluid and tissue and wherein the antibody is optionally humanized; and

b) detecting *in vitro* any immune complex[[es]] formed.

36. (CURRENTLY AMENDED) An *in vitro* ~~malaria diagnostic method~~ process of detecting malaria in an individual susceptible of being infected with *Plasmodium falciparum*, ~~comprising the following steps~~ wherein the process comprises:

a) bringing a biological ~~tissue and/or fluid~~ sample removed from an individual susceptible of being infected with *Plasmodium falciparum* ~~under conditions allowing an immunological reaction~~ into contact with at least one ~~of the following elements: polynucleotides according to any one of claims 1 to 3, polypeptides according to any one of claims 4 to 8, conjugates according to claim 10 or 11;~~ isolated or purified antigen as claimed in claim 9 or an antigenic conjugate comprising at least one isolated or purified antigen as claimed in claim 9 and a support on which said antigen is adsorbed under conditions allowing ~~to allow~~ the formation of an immune complex[[es]] ~~involving at least one of said elements and antibodies~~ between the at least one antigen or the antigenic conjugate and an antibody that may be present in said ~~biological tissue or fluid~~ sample, wherein said sample is a fluid, tissue, or fluid and tissue; and

b) detecting *in vitro* any immune complex[[es]] formed.

37. (CURRENTLY AMENDED) A process as claimed in claim 35, wherein ~~method according to claim 35 or 36, characterized in that in~~ step a)[[,]] further comprises bringing the ~~biological tissue and/or fluid is also brought~~ sample into contact with ~~at least one epitope selected from the group formed by:~~ a peptide molecule,

wherein the peptide molecule is CS, MSP-1, MSP-3, LSA-1, TRAP, STARP, SALSA, SALSA 1, SALSA II, or LSA-3.

38. (CURRENTLY AMENDED) A kit for diagnosing malaria *in vitro*, wherein the kit comprises~~An *in vitro* malaria diagnostic kit, comprising the following elements~~:

a) at least one ~~element selected from the group formed by: polynucleotides according to any one of claims 1 to 3, polypeptides according to any one of claims 4 to 8, conjugates according to claim 10 or 11;~~ isolated or purified antigen as claimed in claim 9 or an antigenic conjugate comprising at least one isolated or purified antigen as claimed in claim 9 and a support on which said antigen is adsorbed;

b) primary reagents for constituting a medium suitable for a binding reaction between an antibody in a test sample and ~~at least one of the elements defined in a)~~ the at least one antigen or the antigenic conjugate; and

c) secondary reagents allowing the detection of an antigen-antibody complex or an antigenic conjugate-antibody complex[[es]] produced by said binding reaction, wherein said secondary reagents ~~also possibly carrying~~ optionally carry a label susceptible of being recognized by a ~~second labelled~~ tertiary reagent, wherein the tertiary reagent is labeled.

39. (CURRENTLY AMENDED) A kit for diagnosing malaria *in vitro*, wherein the kit comprises~~An *in vitro* malaria diagnostic kit, comprising the following elements~~:

[[•]]a) ~~antibodies as defined in claim 13 or 14~~ at least one antibody as claimed in claim 13, wherein said antibody is optionally humanized;

[[•]]b) primary reagents for constituting a medium suitable for allowing a binding reaction between an antigen in a test sample and ~~at least one said antibody~~ said antibody; and

[[•]]c) secondary reagents allowing the detection of an antigen-antibody complex[[es]] produced by said binding reaction, wherein said secondary reagents ~~also possibly carrying~~ optionally carry a label susceptible of being recognized by a ~~second labelled~~ tertiary reagent, wherein the tertiary reagent is labeled.

40. (CURRENTLY AMENDED) A kit for diagnosing malaria *in vitro* as claimed in claim 38, wherein the kit ~~An *in vitro* malaria diagnostic kit according to claim 38 or 39, characterized in that it~~ further comprises ~~at least one peptide molecule selected from the group formed by:~~ a peptide molecule, wherein the peptide molecule is CS, MSP-1, MSP-3, LSA-1, TRAP, STARP, SALSA, SALSA 1, SALSA II, or ~~and~~ LSA-3.

41. (CANCELED).

42. (NEW) A recombinant or chimeric recombinant polypeptide comprising at least one polypeptide as claimed in claim 5.

43. (NEW) A process as claimed in claim 36, wherein step a) further comprises bringing the biological tissue, the biological fluid, or the biological tissue and biological fluid into contact with at least one epitope from CS, MSP-1, MSP-3, LSA-1, TRAP, STARP, SALSA, SALSA 1, SALSA II, or LSA-3.

44. (NEW) A kit for diagnosis of malaria *in vitro* as claimed in claim 39, wherein the kit further comprises a peptide molecule, wherein the peptide molecule is CS, MSP-1, MSP-3, LSA-1, TRAP, STARP, SALSA, SALSA 1, SALSA II, or LSA-3.